Salmonella Javiana in the Southeastern United States: A hypothesis generating study

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Introduction: *Salmonella* serotype Javiana infections have increased 167% between 1996 and 2004 in the FoodNet sites and *S.* Javiana is now the fourth most common *Salmonella* serotype in the United States. Amphibian exposure and consumption of Roma tomatoes grown in the Southeast have been associated with outbreaks of *S.* Javiana infection.

Methods: To identify risk factors for sporadic *S.* Javiana infections, we interviewed patients with laboratory-confirmed *S.* Javiana infection who were identified between August and October 2004 in Georgia, South Carolina, and Tennessee. We collected information regarding food consumption, drinking water, animal contact, and environmental exposures. Responses from cases in GA and TN were compared to population-based survey data collected in these states in 2004. Stratified analyses to adjust for age, rural residence, and gender were performed to evaluate exposures.

Results: One hundred one cases were identified. Of these, 83 (82%) were interviewed (58 in GA, 14 in TN and 11 in SC). Overall, 26% of cases drank private well water in the 7 days before illness onset, compared with 11% of controls (Odds Ratio=3.0, 95% CI=1.7-5.3). In addition, 27% of cases had contact with reptiles or amphibians compared with 6% of controls (Odds Ratio=5.6, 95% CI=2.5-13). No dietary risk factors were identified.

This preliminary study suggests several environmental factors are associated with *S.* Javiana infections in GA and TN. A formal case-control study is needed to further explore the relationships between living in a rural area, gender, age, and environmental risk factors for *S.* Javiana to provide a basis for prevention measures.